

# CTE - CIP Course Details Catalog

## Cluster: Transportation, Distribution, and Logistics

**CIP: 47.0604 - Automobile/Automotive Mechanics Technology/Technician. (Non Traditional - Female)**

**Minimum Carnegie Units: 2.00**

Status: Open    Start Year: 2011    End Year:

**Group 1**

**Minimum Course Selection:**    School: 1    ACC: 0    Regional: 0

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
20001A001	Transportation Technology	1.00	2011	
20101A001	Energy Utilization Technology	1.00	2011	
13052A001	Production Technology	1.00	2011	
11002A001	Communication Technology	1.00	2011	
21052A002	Introduction to Technology and Engineering (Industrial)	1.00	2011	
20106A001	Beginning Automotive Services	1.00	2012	
21052A001	Foundations of Technology	1.00	2014	

**Group 2**

**Minimum Course Selection:**    School: 0    ACC: 1    Regional: 1

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
20104A001	Automotive Technician I	3.00	2011	
20104A002	Automotive Technician II	3.00	2011	
20107A001	Diesel Mechanics	3.00	2013	

**Group 3**

**Minimum Course Selection:**    School: 0    ACC: 0    Regional: 0

State Course ID	State Course Title	Max Carnegie Units	Start SY	End SY
22153A001	Cooperative Education	3.00	2011	
20110A001	Small Engine Repair I	3.00	2017	
20110A002	Small Engine Repair II	3.00	2017	

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### Course Descriptions

#### **CIP: 47.0604 - Automobile/Automotive Mechanics Technology/Technician.**

**State Course ID:** 20001A001      **Course Title:** Transportation Technology

Transportation Technology is a course designed to foster an awareness and understanding of the various transportation customs that make up our mobile society. Through laboratory activities, students are exposed to the technologies of and career opportunities involved in material handling, atmospheric and space transportation, marine transportation, terrestrial transportation, and computer uses in transportation technology.

**State Course ID:** 20101A001      **Course Title:** Energy Utilization Technology

Energy Utilization Technology is a course designed to foster an awareness and understanding of how we use energy in our industrial technological society. Areas of study include conversion of energy, electrical fundamentals, solar energy resources, alternate energy resources such as wind, water, and geothermal; fossil fuels, nuclear power, energy conservation, and computer uses in energy technology. Students use laboratory experiences to become familiar with current energy technologies.

**State Course ID:** 13052A001      **Course Title:** Production Technology

Production Technology is a course designed to foster an awareness and understanding of manufacturing and construction technology. Through a variety of learning activities, students are exposed to many career opportunities in the production field. Experiences in manufacturing include product design, materials and processes, tools and equipment including computers, safety procedures, corporate structure, management, research and development, production planning, mass production, marketing and servicing. In construction, students are exposed to site preparation, foundations, building structures, installing utilities, and finishing and servicing structures.

**State Course ID:** 11002A001      **Course Title:** Communication Technology

Communication Technology is a course designed to foster an awareness and understanding of the technologies used to communicate in our modern society. Students gain experience in the areas of design and drafting, radio and television broadcasting, computers in communication, photography, graphic arts, and telecommunications.

**State Course ID:** 21052A002      **Course Title:** Introduction to Technology and Engineering (Industrial)

Introduction to Technology & Engineering is comprised of the following areas: Production, Transportation, Communication, Energy Utilization and Engineering Design but is not limited to these areas only. This course will cover the resources, technical processes, industrial applications, material sciences, technological impact and occupations encompassed by that system.

**State Course ID:** 20106A001      **Course Title:** Beginning Automotive Services

Beginning Automotive Service course emphasizes preventative auto maintenance and automobile troubleshooting. Course content typically includes tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, suspension, and transmission systems.

**State Course ID:** 21052A001      **Course Title:** Foundations of Technology

The course employs teaching/learning strategies that enable students to build their own understanding of new ideas. It is designed to engage students in exploring and deepening their understanding of "big ideas" regarding technology and apply technological processes to solve real problems and develop knowledge and skills to design, modify, use and apply technology in the following areas: engineering design, manufacturing technologies, construction technologies, energy & power, information & communication technologies and emerging technologies.

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### Course Descriptions

#### **CIP: 47.0604 - Automobile/Automotive Mechanics Technology/Technician.**

**State Course ID:** 20104A001      **Course Title:** Automotive Technician I

This course introduces students to the basic skills needed to inspect, maintain, and repair automobiles and light trucks that run on gasoline, electricity, or alternative fuels. Instructional units include engine performance, automotive electrical system, integrated computer systems, lubrication, exhaust and emission control, steering and suspension, fuel systems, cooling system, braking, and power train.

**State Course ID:** 20104A002      **Course Title:** Automotive Technician II

This course is a continuation of and builds on the skills and concepts introduced in Automotive Technician I. This course includes instructional units in alternative fuel systems, computerized diagnostics, new vehicle servicing, automotive heating and air conditioning, transmissions, testing and diagnostics, drive train and overall automobile performance.

**State Course ID:** 20107A001      **Course Title:** Diesel Mechanics

Diesel Mechanics—Comprehensive courses prepare students to maintain and repair diesel engines and related systems. Specific course topics may include principles underlying diesel engines, analyzing electrical circuits and systems, troubleshooting and repairing cooling systems, testing and repairing air conditioning charging systems, reading and interpreting service manuals, and identifying the principles and components of fuel injection systems. Courses may also cover safety, employability skills, and entrepreneurship.

**State Course ID:** 22153A001      **Course Title:** Cooperative Education

Cooperative Education is a capstone course designed to assist students in the development of effective skills and attitudes through practical, advanced instruction in school and on the job through cooperative education. Students are released from school for their paid cooperative education work experience and participate in 200 minutes per week of related classroom instruction. Classroom instruction focuses on providing students with job survival skills and career exploration skills related to the job and improving students' abilities to interact positively with others. For skills related to the job, refer to the skill development course sequences, the task list or related occupational skill standards of the desired occupational program. The course content includes the following broad areas of emphasis: further career education opportunities, planning for the future, job-seeking skills, personal development, human relationships, legal protection and responsibilities, economics and the job, organizations, and job termination. A qualified career and technical education coordinator is responsible for supervision. Written training agreements and individual student training plans are developed and agreed upon by the employer, student and coordinator. The coordinator, student, and employer assume compliance with federal, state, and local laws and regulations.

**State Course ID:** 20110A001      **Course Title:** Small Engine Repair I

Small engine repair is an instructional program that prepares individuals to troubleshoot, service, and repair a variety of small internal-combustion engines, involving both two and four cycle engines used on portable power equipment. Planned activities will allow students to become knowledgeable of fundamental principles and technical skills related to troubleshooting, repairing, identifying parts and making precision measurements. Safety will be a key component of this class. Students will also be exposed to career opportunities related to small engines.

**State Course ID:** 20110A002      **Course Title:** Small Engine Repair II

This course will be designed to provide the student with the opportunity to complete specialized study in the service and repair of small engines and related systems. Some of these areas may include chain saw repair, snow blower repair, snowmobile repair, generator repair, motorcycle repair, etc. Planned activities will allow students to become knowledgeable of fundamental principles and technical skills related to troubleshooting, repairing, identifying parts and making precision measurements. Other areas that will be covered deal with electrical, systems, ignition systems, drive train and chassis systems. Safety will be a key component of this class. Students will also be exposed to career opportunities related to small engines.